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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,735	11/21/2003	E. Wesley Elliott	282829-00072	1831
3705	7590	12/23/2004	EXAMINER	
ECKERT SEAMANS CHERIN & MELLOTT 600 GRANT STREET 44TH FLOOR PITTSBURGH, PA 15219			RAPP, CHAD	
			ART UNIT	PAPER NUMBER
			2125	

DATE MAILED: 12/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

10/718,735

Applicant(s)

ELLIOTT ET AL.

Examiner

Chad Rapp

Art Unit

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>05/21/04</u> . | 6) <input type="checkbox"/> Other: _____ |

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1. Claims 1-22 are presented for examination.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 21 and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 21, line “the group” should be changed to “a group”. There is insufficient antecedent basis for this limitation in the claim.

In claims 22, “said microelectromechanical system device sensors” should be changed to “a microelectromechanical system device sensors “. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 2, 10, 11, 12, 15, 16 and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Sakatani et al.

Sakatani et al. teaches the claimed invention (claims 1 and 16) including a method of monitoring operation of an automated tool:

- a. Positioning in close proximity to said automated tool at least one wireless sensor is taught as wireless sensors attached to movable shafts of processing machines or the like(abstract);
- b. Monitoring at least one condition of said automated tool by said sensor is taught as monitoring system used in combination of the wireless sensor(paragraph [0019]);
- c. Emitting signals containing sensory information in space to a microprocessor is taught as a communication unit for transmitting by wireless(paragraph [0027]);
- d. Processing said sensor information in said microprocessor is taught as a data processing unit for processing data(paragraph [0026]);
- e. In the event that the processor determines that said automated tool has departed from desired conditions of operation issuing a responsive signal is taught as the data is judged to exceed the threshold value is added with an alarm signal(paragraph [0196]).

As to claim 2, Sakatani et al. teaches employing said method to monitor a said automated tool performing an operation on a work piece is taught as accumulating detection data of the wireless sensors of the running conditions of the machinery and equipment(paragraph[0182]).

As to claim 10, Sakatani et al. teaches transmitting said sensor signals to said processor employing an RF carrier is taught as the signal was a radio wave(paragraph [0081])

As to claim 11, Sakatani et al. teaches transmitting said sensor information as digital information is taught as converting analog signal to digital signal([0169]).

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As to claim 13, Sakatani et al. teaches transmitting said sensor signals only if a monitored condition departs from a desired threshold value is taught as the data is judged to exceed the threshold value is added with an alarm signal(paragraph [0196]).

As to claim 15, Sakatani et al. teaches selecting said responsive signals from a group consisting of an automated tool shutdown, alarm signal; and data delivery signal is taught as the data is judged to exceed the threshold value is added with an alarm signal(paragraph [0196]).

As to claim 22, Sakatani et al. teaches monitoring at least one acceleration related characteristics of said operating automated tool is taught as an acceleration sensor(paragraph[0195]).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3-8, 17, 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakatani et al. in view of Hamel et al.

Sakanti et al. teaches the claimed invention see paragraph number 5 above.

As to claims 3 and 17, Hamel et al. teaches said at least one sensor being in a microelectromechanical system device is taught as microminiaturize, wireless device(paragraph [0012] and paragraph [0015]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made or used to modify the teachings of Sakatani et al. with the teachings of Hamel et al. because Hamel et al. deals with using remote powering which reduces the size of the sensors and also uses micro miniature and wireless devices such as microelectromechanical devices. These things allow the sensors to be embedded into the devices monitored. The provide tiny, accurate and low power sensing.

As to claims 4 and 18, Sakatani et al. teaches employing a plurality of said sensors in said method is taught as a plurality of wireless sensors(paragraph [0064]).

As to claim 5, Hamel et al. teaches measuring by said microelectromechanical system device at least one motion related characteristic of said automated tool is taught as the miniature wireless device comprises a piezoelectric accelerometer([paragraph [0090]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made or used to modify the teachings of Sakatani et al. with the teachings of Hamel et al. because Hamel et al. deals with using remote powering which reduces the size of the sensors and also uses micro miniature and wireless devices such as microelectromechanical devices. These things allow the sensors to be embedded into the devices monitored. The provide tiny, accurate and low power sensing.

As to claims 7 and 20, Hamel et al. teaches sensing by said microelectromechanical system device characteristics of said automated tool related to forces existing in the operation of said automated tool is taught as monitoring vibration(paragraph [0043]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made or used to modify the teachings of Sakatani et al. with the teachings of Hamel et al.

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because Hamel et al. deals with using remote powering which reduces the size of the sensors and also uses micro miniature and wireless devices such as microelectromechanical devices. These things allow the sensors to be embedded into the devices monitored. The provide tiny, accurate and low power sensing.

As to claim 8, Sakatani et al. teaches monitoring said automatic tool properties by said microelectromechanical system device during at least a portion of a cycle of operation of said automated tool is taught as accumulating detection data of the wireless sensors of the running conditions of the machinery and equipment(paragraph[0182]).

As to claim 9, Sakatani et al. teaches monitoring at least one acceleration related characteristics of said operating automated tool is taught as an acceleration sensor(paragraph[0195]).

As to claim 12, Hamel et al. teaches employing in said microelectromechanical system device an inertial sensor is taught as the miniature wireless device comprises a piezoelectric accelerometer(inertial sensor)([paragraph [0090]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made or used to modify the teachings of Sakatani et al. with the teachings of Hamel et al. because Hamel et al. deals with using remote powering which reduces the size of the sensors and also uses micro miniature and wireless devices such as microelectromechanical devices. These things allow the sensors to be embedded into the devices monitored. The provide tiny, accurate and low power sensing.

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8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 6, 14, 19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakatani et al. in view of Fox et al.

Sakatani et al. teaches the claimed invention see paragraph number 5 above.

As to claims 6 and 19, Fox et al. teaches employing as said automated tool a progressive stamping press operating on a metal sheet work piece is taught as a progressive stamping die(abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made or used to modify the teachings of Sakatani et al. with the teachings of Fox et al. because Fox et al. is dealing ways to get rid of the cables and on way Fox et al. discloses is to use non-wired systems(wireless) and wireless is what Sakatani et al. discusses.

As to claim 14, Fox et al. teaches employing said method to monitor misfeed is taught as delivering a messages of misfeed problem(col. 1 line 48-51).

It would have been obvious to one of ordinary skill in the art at the time the invention was made or used to modify the teachings of Sakatani et al. with the teachings of Fox et al. because Fox et al. is dealing ways to get rid of the cables and on way Fox et al. discloses is to use non-wired systems(wireless) and wireless is what Sakatani et al. discusses. Misfeed is an important parameter to monitor because it can lead to increase scrap metal.

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As to claim 21, Sakatani et al. teaches said microprocessor responsive signals being selected from the group consisting of an automated tool shutdown signal, an alarm signal, and a data delivery signal is taught as the data is judged to exceed the threshold value is added with an alarm signal(paragraph [0196]).

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chad Rapp whose telephone number is (571)272-3752. The examiner can normally be reached on Mon-Fri 11:00-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on (571)272-3749. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Chad Rapp
Examiner
Art Unit 2125

cjr

LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100